What Makes a Good Mineral Specimen?

Article # 1 of 4 (aesthetics, damage)

by Jay Penn
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From time to time someone asks me "What makes a good mineral specimen?" or “Why is this one more expensive than that one?” In the first few years after I was introduced to minerals specimens (vs. picking up unusual rocks on camping trips) the question made me uncomfortable because I didn't have a good answer. I’d mumble something about color and form and then say “well, look at it, isn’t it great?” It took me a few more years of looking at a lot of specimens and doing a lot of reading to start to develop a better understanding and answer.

Today I’d say the best answer is that a good specimen is one you like. Aesthetics pure and simple. Is it appealing to you? But that isn't really what was asked, I think they want to know what I, as a mineral dealer and collector consider when I acquire specimens. So I'll list the important points, but as you will see this idea of personal eye appeal isn't going away.

After something catches my eye the next thing I look for is damage. Are the crystals chipped or broken? With experience your eyes will learn to quickly tell the difference between a chipped or broken surface and an undamaged crystal face. If you're not sure, ask someone, it is the only way to learn.

I still have to remind myself to look very carefully, with magnification if possible. Optivisors (those viewers that go around your head with a lens for both eyes) are very handy for this because they give a large close up stereo view. A 10x eye loop is good for looking at a small area very closely, but not so good for looking over a large area. You look like a dork walking around a mineral show with an Optivisor on. In the early years I'd get home and unwrap a specimen that I got a great deal on only to discover that in the excitement I didn't look closely enough and the specimen is damaged. Not a good deal after all. Now I go around shows looking like a dork. This doesn’t mean I don’t buy specimens that have damage it just means I know what the damage is and then decide if the overall aesthetics are good enough that I want it anyway.

Along with the subject of damage is repairs. A reputable dealer will always disclose if a specimen is repaired. The more damage the less desirable and the lower the cost. A good repair recovers some value but not all. Specimens with absolutely no damage whatever are rare and cost accordingly. Remember, these things came out of holes in rocks and it is hard to recover them without any damage. Is the "damage" a contact place where the crystal grew up against another crystal or the host rock. Again, with experience you will learn to tell the difference. A blemish or contact point caused by the natural growth of the crystal doesn't devalue the specimen as much as the same size area broken from the crystal. Again, aesthetics rules.

Next time I’ll talk about color, size, and habit.

What Makes a Good Mineral Specimen?

Article # 2 of 4 (color, size, habit)

by Jay Penn
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The answers to the questions presented in this article get better and better with the more examples you have seen of the species in question. So, as I've said before, if you want to learn about minerals you have to look at a lot of them; go to mineral museums and mineral shows whenever possible. Subscribe to mineral magazines. Accept offers to see private collections. Go to stores, yard sales, etc. where minerals are being sold (even if you aren't interested in buying) to expand the data base in your mind of the range of color, habit, form, etc. a particular mineral can have. I am forever coming across examples that expand my idea of how good, beautiful, or unusual a particular mineral can be.

Color; does this specimen have a particularly rich deep color or is it an unusual color altogether for the species? This might make it more appealing to you. Location factors in here. A good deep purple amethyst from Brazil or Uruguay is very common and inexpensive but that same color amethyst from Catron County, NM is unheard of (to my knowledge) and would be very highly sought after. You will hear the expression "for that location" a lot when mineral enthusiasts (rock nuts) are discussing the color, size, habit, etc. of a specimen.

Size is pretty obvious, all other things being equal, the bigger the specimen the rarer it is. This goes for the size of the overall specimen as well as the size of the individual crystals. Linarite from the Bingham, NM area is most commonly seen as tiny (microscopic) acicular (needle like) or bladed crystals; but possibly the largest and best euhedral crystals ever found on the planet came from a single find there and as far as I know nothing even close has been found since. Some people prefer large cabinet specimens (4" and up) while others focus on miniatures (1-2"), thumb nails, or micro minerals. Some lean toward specimens with many small glittery crystals and others like large individuals or groups of larger crystals. Once again personal taste is the bottom line.

Habit; this is the external form of the crystals. Malachite is most commonly seen as botryoidal (like a bunch of grapes) masses composed of microscopic crystals but visible individual crystals can be found and is a rarer habit for malachite. Calcite and gypsum have more different habits than any other minerals. My first favorite mineral was gypsum because it has so many different forms (and is inexpensive). A mineral may be produced as squat crystals at one location while at another mainly long thin crystals are found. There may be several different habits of the same mineral on the same specimen probably representing different growth cycles under different conditions, this always intrigues me.

Along with habit is twining. This is when the crystal appears to have divided early in its growth and grown in two different directions with a common twining plane joining the two. Sometimes the twinning intersection runs the whole length of the twined crystal (called a closed twin) and sometimes it exists only near the base (called an open twin). Some people specialize in collecting mostly twins. The questions I ask myself are: is this an unusual habit for this mineral or this location, is it a good example of that habit?

The next article will cover matrix, multiple minerals and location.

What Makes a Good Mineral Specimen?

Article # 3 of 4 (matrix, multiple minerals, location)

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Matrix is the host rock/material that the mineral of interest is attached to. Most people seem to prefer specimens that include some matrix but not too much. It should be a visual background for the mineral. Sometimes the matrix is a contrasting or complimentary color or texture that adds significantly to the eye appeal. Matrix is also a clue to where the mineral is from if that information has been lost or is in question. Copper minerals from the southwest all look very similar but a knowledgeable person can look at the matrix and often tell you which mine or county it is from. Matrix generally adds value to the specimen. However some collectors prefer isolated single gem grade crystals with no matrix at all.

Another dimension is added when a specimen has more than one species present. These can be attractive if the minerals compliment each other or they can just look cluttered. When minerals that aren't normally associated with each other are found together this adds value because it infers rarity even if the aesthetics isn't improved. I recently got more involved with micro minerals and become captivated when I look through the micro scope into a tiny vug and see 3, 4 or even 5 different minerals all about the same size and all well formed. With larger specimens usually only 2 or more rarely 3 different minerals are found that are roughly the same size. There may be several other minerals present but they are much smaller and go unnoticed. So when you come across a non micro specimen with 3 or more complimentary sized minerals it is quite a treat. Also larger crystals with much smaller crystals sprinkled on it can be quite appealing.

Location is very important. Most minerals sold have a label with the location where the specimen was found. Specimens without location information should (in my opinion) be priced about half what that specimen would be if it were known to be from a common location for that mineral. Sometimes location information is lost or was never documented by the person who found it, it happens. When I look at a collection for sale if there is no location information or the information consists of a pile of specimen labels not associated with specific specimens my offering price is, you guessed it, half. That is because I have to do the research to try and determine the location or sell it at half price. I was explaining this to someone who wanted to sell me some minerals and he said "so just make up a location" I walked out. Unfortunately that happens but a knowledgeable buyer will spot the "error" right away.

It takes time enough to develop a sense of what constitutes a good specimen of a particular mineral species and now I'm telling you it matters where it is from as well. Again it is just a matter of seeing enough specimens to appreciate that a crummy specimen from location X may be the best that has ever been found there or at least the best I've seen from there and therefore collectable. Once again the phase "for that location" comes into play. Some people's collections are centered on a location, be it a country, state, or county. Some people collect only specimens from a particular mine or quarry constantly looking for new and better examples than they have. These people really know that location and are invaluable sources for what is good or so-so from that location. Does this mean I don't have any minerals in my collection that I don't know where it came from? No, I collect unknown location minerals. If I find a very nice, or unusual mineral that appeals to me I'll buy it. Sometime I later discover where it is from, the value just doubled.

If you've learned nothing else from this article please let it be to have some system in place to record where you picked up that mineral. Don't trust your memory.

Next time mineral rarity, provenance, value/cost

What Makes a Good Mineral Specimen?

Article # 4 of 4 (mineral rarity, provenance, value/cost)

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Rarity falls into two categories. Worldwide rarity and local rarity. Obviously a mineral that is only known to come from one location on the planet and was only found once in a single small pocket adds to its rarity and value. It's going to be hard to find another one. But a mineral that is commonly found around the world but is uncommon from a particular mine adds to its collectability. The phrase "from that location" comes into the picture again.

Be careful when a dealer says "there is no more of this material, the mine is closed" implying that if you don't buy it from him right now you will never see it again. While it is true the mine is closed and will probably never open again the specimens are not rare because literally tons of good specimens are still on the market from old stockpiled material and recycled collections. Over time the specimens will become rarer "from that location" as items are bought, lost, etc. But I can usually find more of that same material at that same show if not this year then next. Of course this does not apply to truly rare specimens from a closed location.

Provenance is a record of who has owned the specimen. It includes: who collected it, when, where, who owned it next, cost, and so forth down the line until you acquired it. All of this information is rarely available so we record what we do know. A mediocre mineral by today's standards with a card saying it was collected by Lord So-and-So in 1735 then owned by Mr. Nobody until 1810, etc. etc. might have more value than one twice as good with only location information. Some people collect old mineral cards even without the minerals to go along with them.

Ok, some specimen has caught your eye, how do you know if the price is fair, too high, or a great deal. I think this only comes with comparing the price against quality of a lot of minerals. Eventually you develop a sense for what seems like a fair market value for a particular specimen until then ask someone with more experience (I do this if it is something I'm unfamiliar with). If you are at a show and shopping around I suggest having a note pad to write down where you saw an item of interest so you can go back and find it again. Note the booth and the location in that booth. Every show I see people trying to find that specimen they thought they would be able to walk right up to. Sometimes it has been sold to someone else in the mean time.

I don't buy specimens I can't see in person so I don't buy on line. Some people do it with good success from trusted sellers, but they can't compare price to quality until it is in their hands.

Bottom line, a good mineral is one you like, but maybe some of what this series of articles has said will help you look at minerals from a more informed position and a more critical eye.

For a broader and deeper perspective on this subject I recommend the reprint of a Mineralogical Record article by Rock Currier titled: About Mineral Collecting. Available from the Mineralogical Record book store (minrec.org) for $10.05 [sic].